

# Fast Recovery Rectifier

## DHG30IM600PC

### FEATURES

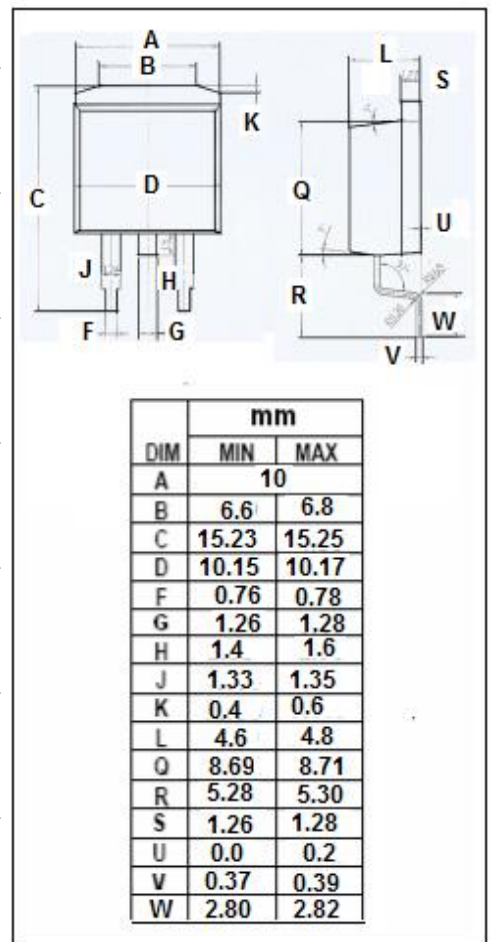
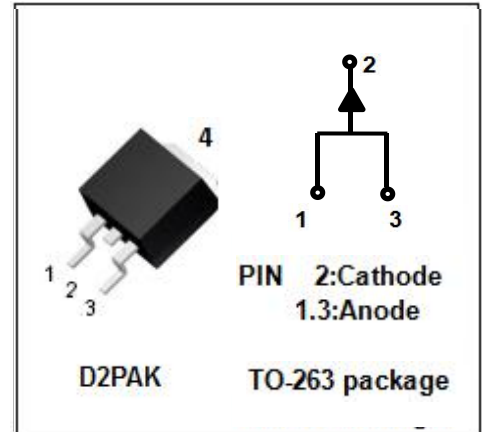
- With TO-263(D<sup>2</sup>PAK) Package
- Very short recovery time
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Anti-parallel diode for high frequency switching devices
- Uninterruptible Power Supplies (UPS)
- Rectifiers in switch mode power supplies (SMPS)

### ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
I <sub>F(AV)</sub>	Average Rectified Forward Current	30	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current@45°C (Surge applied at rated load conditions half-wave, single phase, 60Hz)	200	A
P <sub>D</sub>	Maximum power dissipation	210	W
T <sub>J</sub>	Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



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## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.6	°C/W

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ ) (Pulse Test: Pulse Width=300  $\mu\text{s}$ , Duty Cycle  $\leq 2\%$ )

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F^*$	Maximum Instantaneous Forward Voltage	$I_F = 30\text{A}; T_J = 25^\circ\text{C}$ $I_F = 30\text{A}; T_J = 125^\circ\text{C}$ $I_F = 60\text{A}; T_J = 25^\circ\text{C}$ $I_F = 60\text{A}; T_J = 125^\circ\text{C}$	2.26 2.22 3.11 3.20	V
$I_R^*$	Maximum Instantaneous Reverse Current	$V_R = V_{RWM}; T_J = 25^\circ\text{C}$ $V_R = V_{RWM}; T_J = 125^\circ\text{C}$	50 4000	$\mu\text{A}$
$t_{rr}$	Maximum Reverse Recovery Time	$I_F = 35\text{A}; di/dt = 60\text{A}/\mu\text{s}$	35	ns

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